

REMARKS

SUMMARY

In the Office Action dated April 26, 2004, the drawings were objected to because of a minor informality. Claims 23, 32, 34, and 36 were also objected to because of informalities. Furthermore, claims 1-37 were rejected under 35 U.S.C. §112, 35 U.S.C. § 101 and/or 35 U.S.C. §102(e).

The applicants have amended claims 9, 17, 19, 20, 23, 27, 30, 32, 34, and 36. Accordingly, claims 1-37 remain currently pending. No new matter has been entered.

IN THE DRAWINGS

The examiner has objected to the drawings because the term "Shard" in block 120 of Figure 1 appeared to mistyped. The applicants have submitted herewith replacement drawing sheet 1. In the replacement drawing sheet of Figure 1, the applicants have substituted the word "Shared Memory Resource" for "Shard Memory" in block 120 for purposes of clarity. No new matter has been added.

IN THE SPECIFICATION

The specification has been amended to improve the clarity of the disclosure. In particular, page 7, lines 21-22 have been amended to replace "in turn the practically to provider the multi-version support" with "in turn practically provide multi-version support." No new matter has been added.

IN THE CLAIMS

Objections to the Claims

In the Office Action dated April 26, 2004, claims 23, 32, 34, and 36 were objected to because of informalities in the claim language.

Claim 23 has been amended to add the word "and" after "consumers were last used," as requested by the examiner.

Claim 32 has been amended to add the word "to" after "resource monitor is designed," as the examiner has requested.

Claim 34 has been amended to include a ":" after "comprising."

Claim 36 has been amended to replace the misspelled word "servivce" with "service."

Rejections Under 35 U.S.C. §112, ¶2

In the Office Action dated April 26, 2004, claims 17, 19, and 32 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention.

Claim 17 has been rejected under § 112 because it contains both a method (in the preamble) and means-plus-function language (in the claim body). The applicants assert that there is not a means-plus-function element in the body of the claim, because as MPEP § 2181 states, "the claim limitations must use the phrase "means for" or "step for," for a claim to be considered a means-plus-function style claim under § 112 ¶6.

Here, claim 17 contains no wording, such as “means for” or “step for,” and thus cannot be considered a means-plus-function claim.

In addition, the applicants assert that claim 17 does not contain both a product and process in the same claim because the “consumer resources” and “resource monitor” are merely carrying out the elements of the method defined in the preamble, rather than defining part of a claimed product. Thus claim 17 should be in proper form under MPEP § 2173.05(p) and **Ex Parte Lyell**, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990). However, to expedite examination, the applicants have amended claim 17 to clarify the claim structure by switching the word order of the claim elements (from: “a first resource consumer accepting first allocations,” to: “accepting by a first resource consumer, first allocations...”). The applicants assert, however, that this amendment is made for clarity purposes only and should not be construed as altering the subject matter or scope of the claim.

Claims 19 and 32 have been rejected under § 112 because they recite the limitation, “the aggregate allocations,” without a sufficient antecedent basis. The applicants, however, point out that claims 17 and 30 (from which claims 19 and 32 depend respectively), recite “first allocations” and “second allocations,” thus providing for an antecedent basis for “the aggregate allocations,” where “aggregate” simple refers to both the “first allocations” and the “second allocations.” However, for the sake of clarity the applicants have amended claims 19 and 32 to replace “the aggregate allocations” with “an aggregate of the allocations.”

Accordingly, the applicants request that the rejection to claims 17, 19, and 32 under 35 U.S.C. §112, ¶2 be removed.

Rejections Under 35 U.S.C. §101

Claims 17, 34, and 35 are rejected under 35 U.S.C. § 101 as follows:

Claim 17 stands rejected under § 101 based on the theory that the claim “is directed to neither a “process” nor a “machine” but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. § 101, which is drafted so as to set forth the statutory classes of invention in the alternative only.” Although the applicants believe, as stated above, that claim 17 is not directed to both a process and a machine, the applicants have nonetheless amended claim 17 to clarify this point as previously discussed.

Claim 34 stands rejected as not limited to a practical application of an abstract idea which produced a useful, concrete, and tangible result, as stated in **State Street Bank & Trust v. Signature Financial Group, Inc., 149 F.3d 1368, 1375 n.9 (Fed. Cir. 1998)**. The applicants have amended claim 34 to currently read:

An apparatus comprising:
storage medium having stored therein a plurality of programming instructions designed to implement an application hosting service, including:
a first version of an application hosting service,
a second version of an application hosting service, and
a mechanism to determine whether the first or the second version of the application hosting service is to be employed to host an application service requested; and
at least one processor coupled to the storage medium to execute the programming instructions.

The applicants submit that claim 34 is in proper form under § 101 and request that the rejection be removed.

As claim 35 depends from claim 34, the applicants further submit that claim 35 is in proper form and request that the rejection be removed.

Rejections Under 35 U.S.C. §102(e)

Claims 1-37 are rejected under 35 U.S.C. §102(e) as being anticipated by US patent No. 6,332,168 issued to House et al. ("House").

To begin with, House is directed to finding and associating an application program with its Run Time Libraries at run time (See House, col. 2, Ins. 16-21), while the present invention is generally directed to concurrently hosting application services with multiple versions of the hosted application services". Thus, unlike House's teachings, which focus on providing a central repository (Application Profile Data Base) for Run Time Library usage (House, col. 2, Ins. 17-21), the above-captioned application generally provides a method, system, and program apparatus to perform a dispatching and a shared resource monitoring function to allow an application service with multiple versions to be hosted more efficiently, via more efficient handling of the multiple versions of the runtime libraries and the shared resources. In short, House provides pre-loading of the many run time libraries and a method to access them when linking applications, while the present invention as represented by the claims streamlines the determination and loading of the different run time library versions, thereby boosting the efficiency of hosting multiple versions of an application service. This difference is even clearer when examining the particular elements of the claimed invention.

Claim 1 stands rejected under § 102(e) as anticipated by House. The examiner states that Figures 6, 7, 8, 9, 10, and the related discussion in the specification of

House show every element of applicants' claim 1. The applicants, however, respectfully disagree with this analysis. Claim 1 is drawn to a method of operation within an application service provision apparatus having an application service provision runtime library with multiple versions. The method comprises:

- loading the latest version of the runtime library at initialization of the application service provision apparatus;
- during operation, receiving by a dispatcher a request for service for an application;
- in response, determining by the dispatcher whether the version of the runtime library required by the application is known to the dispatcher; and
- if the version of the runtime library required by the application is not known to the dispatcher, inquiring by the dispatcher with the latest version of the runtime library to learn of the required version of the runtime library.

Thus, at initialization of the application service provision apparatus, **the latest** version of a runtime library is loaded. In the event that a version of the runtime library required by a requested application is not known to a dispatcher (because it has yet to be loaded), the dispatcher makes an inquiry **with the latest version of the runtime library** that had been previously loaded, to determine the appropriate version of the missing runtime library to be loaded, and loads the missing runtime library accordingly. Note that the knowledge of the other versions of the runtime libraries rest with the latest version, which is always loaded, as it is loaded at initialization time. Accordingly, only the latest version of a runtime library is loaded until such time an earlier version is needed, thus reducing the amount of resources required of the application service provision apparatus to host multiple versions of an application service. In turn, by virtue of the ability to efficiently host multiple versions of an application service, the application

service may be enhanced more rapidly (creating more versions), while users do not have to be forced to migrate to the later versions.

In contrast, House does not teach loading by default the **latest** version of the runtime library at initialization of an application service provision apparatus, let alone inquiring by the dispatcher **with the latest version of the runtime library** to learn of the required version of the runtime library. Instead, House teaches **pre-loading a number of versions of an application**, providing an indexing scheme to access them, and packaging an informational message and/or the default library vector pointer (LVP) to send back to the application, when an Application Group Identifier (AGI) and Library Identifier (LI) do not exist for a requested runtime library. (See e.g., House col. 9, Ins. 1-13, col. 9 ln. 62 – col. 10 ln. 14, Figs. 7 and 8.) House also states, “if a Library Identifier does not exist . . . the application program should use the default Library Identifier. This indicates that [at least some] application programs will [have] no specific language runtime library requirement, rather that it should be given whatever the installation has indicated via the Application Profile Data Base is the default level.” (See e.g., House, col. 10 Ins. 3-11). Furthermore, House loads a list of multiple runtime libraries into common storage (CSA), so that when a local machine needs to access one of the libraries it merely needs to check the Application Profile Data Base to Index which runtime library in CSA is required. (House Fig. 6, element 610, col. 7, Ins. 40-53.) The present invention as represented by at least claim 1, however, initially only loads the latest version of a runtime library because in an application service environment (where there may be many requests for the application from different clients) it is far more efficient to initially load one version (here the latest version) and

then retrieve other versions upon special requests by certain clients. Thus, for at least the reasons set forth above, Applicants submit that House does not anticipate claim 1 under § 102(e). As such, the applicants submit that claim 1 is in proper form for allowance and request that the rejection be removed.

As with claim 1, claims 7, 9 and 16 are similarly rejected under § 102(e) as anticipated by House. Applicants submit that claims 7, 9 and 16 contain similar limitations to claim 1. Thus, for at least the reasons set forth above with respect to claim 1, applicants believe that claims 7, 9 and 16 are likewise in proper form for allowance.

Claims 2-6, 8, and 10-15 depend on claims 1, 7, and 9, respectively. Due at least in part on their dependency, Applicants submit that claims 2-6, 8, and 10-15 are likewise in proper form for allowance.

Claim 17 also stands rejected under § 102(e) as being anticipated by House. Again, applicants respectfully disagree with this interpretation. Claim 17 is drawn to a method comprising:

- accepting by a first resource consumer, first allocations of a first plurality of portions of a shared resource, and tracking first points in time the first allocations were last used;

- accepting by a second resource consumer, second allocations of a second plurality of portions of the shared resource, and tracking second points in time the second allocations were last used;

- conditionally requesting by a resource monitor, the first and second resource consumers to provide said tracked first and second points in time, and the first and second resource consumers responsively providing the tracked first and second points in time as requested;

- determining by the resource monitor which if any of the first and second allocations of the portions of the shared resource are to be released by the first and second resource consumers, and instructing the first and second resource consumers accordingly; and

releasing by the first and second resource consumers, selected ones of the first and second allocations as instructed.

Thus, claim 17 is directed to a shared resource that allocates shared resources to a variety of resource consumers, which also correspondingly track usage of the allocated resources. Further, the resource monitor may request the resource consumers for the tracked usage information, and use these information to determine what instructions to give to the consumers to release sections of the allocations as needed. House, in contrast, does not teach or otherwise suggest a shared resource, where usage tracking is performed by the resource consumers, or may be requested and used by the resource monitor in determining what resources are to be released. Rather, House only teaches “providing optional use of common storage or private storage” to isolate the requesting applications. (House, col. 2, Ins. 58-63.) Although the common storage that House teaches can be accessed by multiple applications, he specifically does not teach a resource consumer that tracks usage of the allocated shared resources, and which may further be requested and used by the resource monitor to determine which of the allocated share resources are to be released.

Thus, for at least the reasons set forth above, Applicants submit that House does not anticipate claim 17. As such, the applicants submit that claim 17 is in proper form for allowance and request that the rejection be removed.

Claims 18-19 depend from claim 17. For at least the reasons set forth above with respect to claim 17, Applicants submit claims 18 and 19 are in proper form for allowance.

Claims 20 and 27 stand rejected under § 102(e) as being anticipated by House.

Claims 20 is directed to a method and claim 27 is directed to an apparatus, however they are similar in form. In particular, claim 20 recites:

accepting allocations of a plurality of portions of a shared resource;
tracking points in time the allocations were last used;
receiving a request to provide the tracked points in time;
in response, providing the tracked points in time as requested;
receiving instructions to release selected ones of the allocations; and
releasing the specified allocations as instructed.

While House may provide a central repository for information regarding Run Time Library usage and an improved central control of migration and application policies (see e.g., col. 2 Ins. 15-24; col. 2, Ins. 37-40), House does not teach tracking by the resource consumers, identifying points in time where the allocations of the shared resource were last used, and making available the tracked usage information requested by the resource monitor, to allow the resource monitor to be able to determine which of the allocated resources are to be released. Applicants submit that the disclosure of a central storage area can not be read on providing a method and apparatus to dynamically control the allocation and release of a shared resource, employing distributed tracking and reporting of usage times. Thus, for at least these reasons, the applicants submit that the claims are in proper form for allowance and request that the rejections be removed.

Claims 21-22 and 28-29 depend from claims 20 and 27. Due at least in part to their dependence, applicants submit that claims 21-22 and 28-29 are likewise in proper form for allowance.

Claims 23 and 30 also stand rejected under § 102(e) as being anticipated by House. Claim 23 is directed to a method and claim 30 is directed to an apparatus, however they are similar in form. In particular, claim 23 is directed to a method of operating a shared resource monitor, where the shared resource monitor includes:

conditionally requesting a plurality of shared resource consumers to provide corresponding tracked plurality points in time, where corresponding plurality of portions of a shared resource allocated to the plurality of shared resource consumers were last used; and
determining which if any of the plurality of allocations of the portions of the shared resource are to be released by the plurality of shared resource consumers, and instructing the plurality of shared resource consumers to release selected ones of the plurality of allocations accordingly.

Therefore, Claims 23 and 30 are similarly directed to a shared resource and the method of tracking usage time of shared resource consumers to determine if and which allocated sections of the shared resource need to be released. For at least the reasons mentioned above regarding claims 17, 20 and 27, the applicants submit that House does not anticipate these claims. As such, claims 23 and 30 are in proper form for allowance and the applicants request that the rejections be removed.

Claims 24-25 and 31-33 depend from claims 23 and 30 respectively. Due at least in part to their dependence, applicants submit that claims 24-25 and 31-33 are likewise in proper form for allowance.

Claims 34 and 36 also stand rejected under § 102(e) as being anticipated by House. Claim 34 is directed to an apparatus, and claim 36 to a method of operating the apparatus regarding application service hosting. Claim 34 is representative of claim 36 and provides an apparatus comprising:

a first version of an application hosting service;
a second version of an application hosting service; and

a mechanism to determine whether the first or second version of the application hosting service is to be employed to host an application service requested.

Thus, claim 34 provides multiple versions of **an application hosting service** and a mechanism to determine the proper version of the application hosting service. Unlike claim 34 (and similarly formed claim 36), House is directed to a computer program on a particular machine to dynamically link run time libraries. See House, col. 2, Ins. 16-21. In particular, House does not disclose or teach any method of using these dynamically linked run time libraries with an application hosting service, teach how to provide multiple versions of an application hosting service, or teach a mechanism to determine which version of an application hosting service is required upon a request. Although House may be read as teaching the ability to store and locate multiple versions of language runtime modules, because this disclosure of storing multiple versions of an object is directed to language runtime modules instead of application hosting services, this teaching can not be said to read on the claimed elements.

Thus, for at least the reasons set forth above, the applicants submit that House does not anticipate claims 34 and 36. As such, the claims are in proper form for allowance and the applicants request that the rejections be removed.

Claims 35 and 37 depend from claims 34 and 36 respectively. Due at least in part to their dependence, applicants submit that claims 35 and 37 are likewise in proper form for allowance.

CONCLUSION

In light of the above amendments and remarks, this application is now in condition for allowance. Claims 1-37 remain currently pending. Early issuance of Notice of Allowance is respectfully requested.

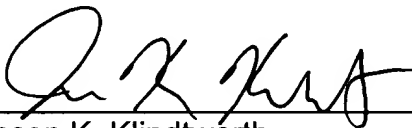
The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393. A Fee Transmittal is enclosed in duplicate for fee processing purposes.

Respectfully submitted,

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Dated: _____

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